

## CLAIMS

1. A portable memory device comprising a substrate supporting:  
a first memory;  
a display;  
a communications interface for establishing a user-severable communication link between the memory device and a plurality of different hosts at different times; and  
a controller operable in response to user input to:  
store in the memory an image received from a first one of the hosts via the communication link while the portable device is in communication with the first host,  
render on the display an image represented in a file in the memory at least while the portable device is not in communication with any host, and  
transform an image in the memory from a first image file format to a second image file format,  
wherein the portable memory device fits within a bounding box having first and second parallel surfaces separated by no more than 10.5mm.
2. A device according to claim 1, wherein the first and second parallel surfaces are separated by no more than approximately 5.0mm.
3. A device according to claim 1, wherein at least one of the hosts is physically larger than the memory device,  
further comprising a mounting system for rigidly attaching the memory device to each of the hosts at different times.
4. A device according to claim 1, wherein the controller is further operable to:

determine a second image file format suitable for a second one of the hosts, and  
communicate the image to the second host via the communication link according to the  
second image file format while the portable device is in communication with the second host.

5. A device according to claim 1, wherein the controller is further operable in  
response to user input to transfer to the first host via the communication link an image from the  
memory while the memory device is in communication with the first host.

6. A device according to claim 1, wherein the controller is further operable in  
response to user input to transfer to a second one of the hosts via the communication link an  
image from the memory while the memory device is in communication with the second host, the  
second host being different from the first host.

7. A device according to claim 1, wherein the controller is further operable in  
response to user input to receive from the first host via the communication link a first image  
according to a first image file format for storage in the memory while the memory device is in  
communication with the first host,

and wherein the controller is further operable in response to user input to transfer to a  
second one of the hosts via the communication link the first image in a second image file format  
while the memory device is in communication with the second host, the second host being  
different from the first host and the second image file format being different from the first image  
file format.

8. A device according to claim 1, wherein the controller is further operable to render  
on the display an image from the first host while the memory device is in communication with  
the first host.

9. A device according to claim 8, wherein the controller is operable such that when operated to render on the display an image from the first host while the memory device is in communication with the first host, the image bypasses the memory.

10. A device according to claim 1, wherein the display comprises a member of the group consisting of an LCD display, polymer with photoresist properties, a plasma display an OLED display and a cholesteric display.

11. A device according to claim 1, wherein the display comprises a touch screen.

12. A device according to claim 1, wherein the communication link is a member of the group consisting of wired, wireless, magnetic, and infrared communication links.

13. A device according to claim 1, wherein the plurality of different hosts includes at least two hosts which are members of the group including but not limited to a personal computer, a PDA, a cellular telephone, a set top box, a TIVO device, and a digital camera.

14. A device according to claim 1, wherein the first host comprises a digital camera.

15. A device according to claim 1, further comprising a mechanical interface for rigidly attaching the memory device to a plurality of different hosts at different times.

16. A device according to claim 15, wherein the mechanical interface is such that attachment of the device to a particular host also enables the communication link between the device and the particular host, and detachment of the device to the particular host also severs the communication link between the device and the particular host.

17. A device according to claim 1, wherein the communications interface includes a first connector disposed along an edge of the device,

wherein a particular one of the hosts includes a slot sized to receive the device and having a second connector adapted to mate with the first connector when the device is inserted into the slot.

18. A device according to claim 1, further comprising a particular one of the hosts which includes a slot for receiving and holding a plurality of the memory devices simultaneously.

19. A device according to claim 18, wherein the communications interface on each of the memory devices includes a respective first connector disposed along an edge of the respective memory device,

and wherein the slot includes a respective second connector adapted to mate with the respective first connector of each one of the memory devices inserted into the slot.

20. A device according to claim 18, wherein the particular host is operable to write an image, in response to a single user-commit, to all the memory devices then held in the slot.

21. A device according to claim 18, wherein the particular host is operable to write an image to a subset of the memory devices then held in the slot in dependence upon user selection input.

22. A device according to claim 18, further comprising a cartridge for receiving the plurality of the memory devices simultaneously, the slot in the particular host being for receiving the cartridge.

23. A device according to claim 22, further comprising a mechanical structure to hold, release, and eject the cartridge from said body.

24. A device according to claim 1, wherein the memory, the display, the communications interface and the controller are all rigidly attached to the substrate.

25. A device according to claim 24, wherein the substrate is rigid.
26. A device according to claim 24, wherein the substrate is flexible.
27. A device according to claim 1, wherein the controller comprises a general purpose processor and program memory.
28. A device according to claim 27, wherein the controller comprises a plurality of processors including the general purpose processor.
29. A device according to claim 27, wherein the controller is further operable to write into the program memory program code received from an external source.
30. A device according to claim 27, wherein the program memory is distinct from the first memory.
31. A device according to claim 27, wherein the program memory includes program code operable to perform the operation of transforming an image from a first image file format to a second image file format.
32. A device according to claim 1, wherein a second one of the hosts is operable to form a plurality of sequential individual images, wherein the controller is further operable to:
- store in the memory the plurality of sequential images; and
  - render the sequential images sequentially on the display as a movie.
33. A device according to claim 1, wherein a second one of the hosts is operable to form a movie, wherein the controller is further operable to:
- store the movie in the memory; and
  - render on the display a selected image from the movie as a still image.

34. A device according to claim 1, wherein a second one of the hosts is operable to form a plurality of sequential individual images, wherein the controller is further operable to:

receive the plurality of sequential images;

convert the plurality of sequential images into a video file; and

store the video file in the first memory.

35. A device according to claim 1, wherein a second one of the hosts is operable to form a video file, and wherein the controller is operable to:

store the video file in the first memory;

display the video file on the display; and

in response to user input, capture an image frame of the video file and store it as an image file in the first memory.

36. A device according to claim 1, wherein the controller is further operable to perform, in response to user input, file management functions on files stored in the memory.

37. A device according to claim 1, wherein the portable memory device further comprises an audio feature including a member of the group consisting of one or more speakers and an audio jack, and wherein the controller is further operable in response to user input to:

store in the memory a sound received from one of the hosts via the

communication link while the portable device is in communication with the first host, and

play via the audio feature a sound represented in a file in the memory at least

while the portable device is not in communication with any host.

38. A device according to claim 1, wherein the controller is further operable in response to user input to:

store in the memory a moving image received from one of the hosts via the communication link while the portable device is in communication with the first host, and play via the display a moving image represented in a file in the memory at least while the portable device is not in communication with any host.

39. A device according to claim 1, wherein the portable memory device further comprises an audio feature including a member of the group consisting of a speaker and an audio jack, and wherein the controller is further operable in response to user input to:

store in the memory an image with associated sounds received from one of the hosts via the communication link while the portable device is in communication with the first host,

render the image on the display at least while the portable device is not in communication with any host, and

play the associated sounds via the audio feature while rendering the image on the display.

40. A device according to claim 1, wherein the controller is further operable in response to user input to:

store in the memory a document received from one of the hosts via the communication link while the portable device is in communication with the first host, and

render the document on the display at least while the portable device is not in communication with any host.

41. A device according to claim 1, wherein the portable memory device further comprises an audio feature including a member of the group consisting of a speaker and an audio jack, and wherein the controller is further operable in response to user input to:

store in the memory textual information received from one of the hosts via the communication link while the portable device is in communication with the first host, and articulate the textual information via the audio feature at least while the portable device is not in communication with any host.

42. A device according to claim 1, wherein the portable memory device comprises, for providing the user input, a member of the group consisting of a touch screen, a button, a switch, and a receiver for a remote control device.

43. A device according to claim 1, wherein the portable memory device further comprises a speech recognition feature for providing the user input.

44. A device according to claim 1, wherein the controller is further operable to: determine a geolocation of the portable memory device; and render on the display a map which includes a visible marking of the geolocation.



45. A portable memory device comprising a substrate supporting:
- a memory;
  - a display;
  - a communications interface for establishing a user-severable communication link between the memory device and a plurality of different hosts at different times, at least one of the hosts being physically larger than the memory device;
  - a mounting system for rigidly attaching the memory device to each of the host at different times; and
  - a controller operable in response to user input to:
    - store in the memory an image received from a first one of the hosts via the communication link while the portable device is in communication with the first host,
    - render on the display an image represented in a file in the memory at least while the portable device is not in communication with any host, and
    - transform an image in the memory from a first image file format to a second image file format.
46. A device according to claim 45, wherein the mounting system is independent of the communications interface.
47. A device according to claim 46, wherein the mounting system comprises at least one of a surface of hooks or a surface of loops for a hook-and-loop fastening system.
48. A device according to claim 45, wherein the mounting system and the communications interface both comprise a rigid an electrical connector for mating with a corresponding connector on each of the hosts at different times.

49. A device according to claim 45, wherein the controller is further operable to:  
determine a second image file format suitable for a second one of the hosts, and  
communicate the image to the second host via the communication link according to the  
second image file format while the portable device is in communication with the second host.

50. A device according to claim 45, wherein the controller is further operable in  
response to user input to transfer to the first host via the communication link an image from the  
memory while the memory device is in communication with the first host.

51. A device according to claim 45, wherein the controller is further operable in  
response to user input to transfer to a second one of the hosts via the communication link an  
image from the memory while the memory device is in communication with the second host, the  
second host being different from the first host.

52. A device according to claim 45, wherein the controller is further operable in  
response to user input to receive from the first host via the communication link a first image  
according to a first image file format for storage in the memory while the memory device is in  
communication with the first host,

and wherein the controller is further operable in response to user input to transfer to a  
second one of the hosts via the communication link the first image in a second image file format  
while the memory device is in communication with the second host, the second host being  
different from the first host and the second image file format being different from the first image  
file format.

53. A device according to claim 45, wherein the controller is further operable to render on the display an image from the first host while the memory device is in communication with the first host.

54. A device according to claim 53, wherein the controller is operable such that when operated to render on the display an image from the first host while the memory device is in communication with the first host, the image bypasses the memory.

55. A device according to claim 45, wherein the communication link is a member of the group consisting of wired, wireless, magnetic, and infrared communication links.

56. A device according to claim 45, wherein the first host comprises a digital camera.

57. A device according to claim 45, wherein the communications interface includes a first connector disposed along an edge of the device,

wherein a particular one of the hosts includes a slot sized to receive the device and having a second connector adapted to mate with the first connector when the device is inserted into the slot.

58. A device according to claim 45, further comprising a particular one of the hosts which includes a slot for receiving and holding a plurality of the memory devices simultaneously.

59. A device according to claim 58, wherein the communications interface on each of the memory devices includes a respective first connector disposed along an edge of the respective memory device,

and wherein the slot includes a respective second connector adapted to mate with the respective first connector of each one of the memory devices inserted into the slot.

60. A device according to claim 58, wherein the particular host is operable to write an image, in response to a single user-commit, to all the memory devices then held in the slot.

61. A device according to claim 58, wherein the particular host is operable to write an image to a subset of the memory devices then held in the slot in dependence upon user selection input.

62. A device according to claim 58, further comprising a cartridge for receiving the plurality of the memory devices simultaneously, the slot in the particular host being for receiving the cartridge.

63. A device according to claim 45, wherein the memory, the display, the communications interface and the controller are all rigidly attached to the substrate.

64. A device according to claim 63, wherein the substrate is rigid.

65. A device according to claim 45, wherein the controller comprises a general purpose processor and program memory.

66. A device according to claim 65, wherein the controller comprises a plurality of processors including the general purpose processor.

67. A device according to claim 65, wherein the program memory includes program code operable to perform the operation of transforming an image from a first image file format to a second image file format.

68. A device according to claim 45, wherein a second one of the hosts is operable to form a plurality of sequential individual images, wherein the controller is further operable to:  
store in the memory the plurality of sequential images; and  
render the sequential images sequentially on the display as a movie.

69. A device according to claim 45, wherein a second one of the hosts is operable to form a plurality of sequential individual images, wherein the controller is further operable to:

receive the plurality of sequential images;

convert the plurality of sequential images into a video file; and

store the video file in the first memory.

70. A device according to claim 45, wherein a second one of the hosts is operable to form a video file, and wherein the controller is operable to:

store the video file in the first memory;

display the video file on the display; and

in response to user input, capture an image frame of the video file and store it as an image file in the first memory.

71. A device according to claim 45, wherein the portable memory device further comprises an audio feature including a member of the group consisting of a speaker and an audio jack, and wherein the controller is further operable in response to user input to:

store in the memory a sound received from one of the hosts via the communication link while the portable device is in communication with the first host, and

play via the audio feature a sound represented in a file in the memory at least while the portable device is not in communication with any host.

72. A device according to claim 45, wherein the portable memory device further comprises an audio feature including a member of the group consisting of a speaker and an audio jack, and wherein the controller is further operable in response to user input to:

store in the memory textual information received from one of the hosts via the communication link while the portable device is in communication with the first host, and articulate the textual information via the audio feature at least while the portable device is not in communication with any host.

73. A device according to claim 45, wherein the controller is further operable to: determine a geolocation of the portable memory device; and render on the display a map which includes a visible marking of the geolocation.

74. A portable memory device comprising a substrate supporting:  
a memory;  
a display;  
a communications interface for establishing a user-severable communication link between  
the memory device and a plurality of different hosts at different times; and  
a controller operable to:

store in the memory an image received from a first one of the hosts via the  
communication link according to a first image file format while the portable device is in  
communication with the first host,

render on the display an image represented in a file in the memory at least while  
the portable device is not in communication with any host,

determine a second image file format suitable for a second one of the hosts, and  
communicate the image to the second host via the communication link according  
to the second image file format while the portable device is in communication with the  
second host.

75. A device according to claim 74, wherein the controller is operable further to  
transform an image in the memory from a first image file format to the second image file format  
for in response to determining the second image file format.

76. A device according to claim 74, wherein the controller is operable to determine  
the second image file format by interrogating the second host while the portable device is in  
communication with the second host.

77. A device according to claim 74, wherein the controller is operable to determine the second image file format in dependence upon information received from the second host indicating a device type.

78. A device according to claim 74, wherein the controller is further operable in response to user input to receive from the first host via the communication link a first image according to a first image file format for storage in the memory while the memory device is in communication with the first host,

and wherein the controller is further operable in response to user input to transfer to a second one of the hosts via the communication link the first image in a second image file format while the memory device is in communication with the second host, the second host being different from the first host and the second image file format being different from the first image file format.

79. A device according to claim 74, wherein the controller is further operable to render on the display an image from the first host while the memory device is in communication with the first host.

80. A device according to claim 74, wherein the communication link is a member of the group consisting of wired, wireless, magnetic, and infrared communication links.

81. A device according to claim 74, wherein the plurality of different hosts includes at least two hosts which are members of the group consisting of a personal computer, a PDA, a cellular telephone, a set top box, a TIVO device, and a digital camera.

82. A device according to claim 74, wherein the communications interface includes a first connector disposed along an edge of the device,



wherein a particular one of the hosts includes a slot sized to receive the device and having a second connector adapted to mate with the first connector when the device is inserted into the slot.

83. A device according to claim 74, further comprising a particular one of the hosts which includes a slot for receiving and holding a plurality of the memory devices simultaneously.

84. A device according to claim 83, further comprising a cartridge for receiving the plurality of the memory devices simultaneously, the slot in the particular host being for receiving the cartridge.

85. A device according to claim 74, wherein the memory, the display, the communications interface and the controller are all rigidly attached to the substrate.

86. A device according to claim 74, wherein a second one of the hosts is operable to form a plurality of sequential individual images, wherein the controller is further operable to:

- store in the memory the plurality of sequential images; and
- render the sequential images sequentially on the display as a movie.

87. A device according to claim 74, wherein a second one of the hosts is operable to form a video file, and wherein the controller is operable to:

- store the video file in the first memory;
- display the video file on the display; and
- in response to user input, capture an image frame of the video file and store it as an image file in the first memory.

88. A device according to claim 74, wherein the portable memory device further comprises an audio feature including a member of the group consisting of a speaker and an audio jack, and wherein the controller is further operable in response to user input to:

store in the memory a sound received from one of the hosts via the communication link while the portable device is in communication with the first host, and play via the audio feature a sound represented in a file in the memory at least while the portable device is not in communication with any host.

89. A device according to claim 74, wherein the controller is further operable in response to user input to:

store in the memory a moving image received from one of the hosts via the communication link while the portable device is in communication with the first host, and play via the display a moving image represented in a file in the memory at least while the portable device is not in communication with any host.

90. A device according to claim 74, wherein the portable memory device further comprises an audio feature including a member of the group consisting of a speaker and an audio jack, and wherein the controller is further operable in response to user input to:

store in the memory textual information received from one of the hosts via the communication link while the portable device is in communication with the first host, and articulate the textual information via the audio feature at least while the portable device is not in communication with any host.

91. A device according to claim 74, wherein the controller is further operable to:  
determine a geolocation of the portable memory device; and

render on the display a map which includes a visible marking of the geolocation.

92. A portable memory device comprising a substrate supporting:

- a display;
- a communications interface for establishing a user-severable communication link between the memory device and a plurality of different hosts at different times;
- a receptacle for receiving a further memory device removable from the portable memory device; and
- a controller operable in response to user input to:
  - store in memory of the further memory device an image received from a first one of the hosts via the communication link while the portable device is in communication with the first host and the further memory device is in communication with the portable memory device,
  - render on the display an image represented in a file in the memory of the further memory device at least while the portable device is not in communication with any host, and
  - transform an image in the memory of the further memory device from a first image file format to a second image file format,

wherein the portable memory device fits within a bounding box having first and second parallel surfaces separated by no more than 10.5mm.

93. A method for sharing an image, for use with a portable memory device having a substrate supporting a memory, a display and a controller, comprising the steps of:

- establishing communication between the memory device and a first host;
- while the first host is in communication with the memory device, capturing an image through the first host and into the memory of the memory device, the image being communicated to the memory device according to a first file format;
- removing the memory device from communication with the first host;
- establishing communication between the memory device and a second host;
- determining from the second host a second image file format suitable for the second host;
- while the second host is in communication with the memory device and the first host is not in communication with the memory device, transferring the image from the memory to the second host in the second image file format; and
- rendering the image on the display of the memory device while the memory device is not in communication with any host.

94. A method according to claim 93, further comprising the step of transforming the image from the first file format to the second file format while the memory device is not in communication with the first host.

95. A method according to claim 93, wherein the step of determining comprises the step of interrogating the second host.

96. A method according to claim 93, wherein the step of determining comprises the step of determining the second image file format in dependence upon information received from the second host indicating a device type.

97. A method according to claim 93, wherein the memory device fits within a bounding box having first and second parallel surfaces separated by no more than 10.5mm.

98. A method according to claim 93, wherein the memory device fits within a bounding box having first and second parallel surfaces separated by no more than approximately 5.0mm.

99. A method according to claim 93, wherein the memory device includes a receptacle for a further removable memory device, wherein the step of capturing an image comprises the step of storing the image in the further removable memory device, further comprising the steps of::

attaching the further removable memory device to the receptacle prior to the step of capturing an image; and

removing the further removable memory device after the step of transferring the image to the second host.

100. A portable memory device comprising a substrate supporting:  
a first memory;  
a display;  
a communications interface for establishing a user-severable communication link between the memory device and a plurality of different hosts at different times; and  
a controller operable in response to user input to:  
store in the memory an image received from a first one of the hosts via the communication link while the portable device is in communication with the first host, and  
render on the display an image represented in a file in the memory at least while the portable device is not in communication with any host,  
wherein the portable memory device fits within a bounding box having first and second parallel surfaces separated by no more than 10.5mm,  
and wherein the display fills a major surface of the device.

101. A device according to claim 100, wherein said controller is operable further to transform an image in the memory from a first image file format to a second image file format.

102. A portable memory device comprising a substrate supporting:

- a first memory;
- a display;
- a communications interface for establishing a user-severable communication link between the memory device and a plurality of different hosts at different times; and
- a controller operable in response to user input to:
  - store in the memory an image received from a first one of the hosts via the communication link while the portable device is in communication with the first host, and
  - render on the display an image represented in a file in the memory at least while the portable device is not in communication with any host,

wherein the portable memory device fits within a bounding box having first and second parallel surfaces separated by no more than 10.5mm,

wherein the device has a major surface having major and minor dimensions,

and wherein the display fills said major surface except for a border no wider than 1/16 the size of said minor dimension.

103. A device according to claim 102, wherein said controller is operable further to transform an image in the memory from a first image file format to a second image file format.